AGENCY USE ONLY				
PERMIT NO.:	Date Rec'd.:	Amount Rec'd.:	Check No.:	Rec'd By:
MT6 010187	10/21/13	600.00	45975	DD

10/21/13

Montana Department of
ENVIRONMENTAL QUALITY

WATER PROTECTION BUREAU

FORM
NOI

Notice of Intent (NOI) for Montana Pollution Discharge Elimination System Application for New and Existing Concentrated Animal Feeding Operations

The Application form is to be completed by the owner or operator of a Concentrated Animal Feeding Operation (CAFO) or Aquatic Animal Production Facility. Please read the attached instructions before completing this form. You must print or type legibly; forms that are not legible or are not complete will be returned. You must maintain a copy of the completed application form for your records.

Section A - Application Status *(Check one)*:

- ☐ New — No prior application submitted for this site.
- ☐ Resubmitted — Permit Number: MTG _____
- ☑ Renewal — Permit Number: MTG 0 1 0 1 8 7
- ☐ Modification — Permit Number: MTG _____

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DEQ/WPB
PERMITTING & COMPLIANCE DIV.

Section B - Facility or Site Information (*See instruction sheet.*):

Site Name: Missoula Livestock Exchange LLC

Site Location: 8598 Robbins Road Missoula, MT

Nearest City or Town: Missoula County: Missoula

Latitude: 46° 57' 16" N Longitude: 114° 8' 23" W

Date Facility began operation? October 1989

Is this facility or site located on Indian Lands? ☐ Yes ☑ No

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name: Missoula Livestock Exchange LLC

Mailing Address: 8598 Robbins Road

City, State, and Zip Code: Missoula, MT 59808

Phone Number: 406 728-3052

Is the person listed above the owner? ☑ Yes ☐ No

Status of Applicant *(Check one)* ☐ Federal ☑ State ☐ Private ☐ Public ☐ Other (specify) _____

WPTS
204

Section D - Existing or Pending Permits, Certifications, or Approvals: [v] None

[X] MPDES MTG010187 [ ] RCRA _____

[ ] PSD (Air Emissions) _____ [ ] Other _____

[ ] 404 Permit (dredge & fill) _____ [ ] Other _____

Section E – Standard Industrial Classification (SIC) Codes:

Provide at least one SIC code which best reflects the activity of project described in Section H.			
Code	**A. Primary**	**Code**	**B. Second**
1	5154	2	
Code	**C. Third**	**Code**	**D. Fourth**
3		3	

Section F - Facility or Site Contact Person/Position:

Name and Title, or Position Title: Camille Coughlin, Member

Mailing Address: 8598 Robbins Road

City, State, and Zip Code: Missoula, MT 59808

Phone Number: 406 728-3052

Section G – Receiving Surface Waters(s):

Outfall/Discharge Locations: For each outfall, List latitude and longitude to the nearest second and the name of the receiving waters

Outfall Number	Latitude	Longitude	Receiving Surface Waters
001	46.96286	114.15381	O'Keefe Creek
002			
003			
004			
005			

Map: Attach a topographic map extending one mile beyond the property boundaries or the site activity identified in Section B depicting the facility or activity boundaries, major drainage patterns, and the receiving surface waters, stated above. Also identify the specific location of the production area, and land application area(s).

Is the receiving water on the 303(d) list for nutrients (nitrogen and/or phosphorus) [ ] Yes [✓] No

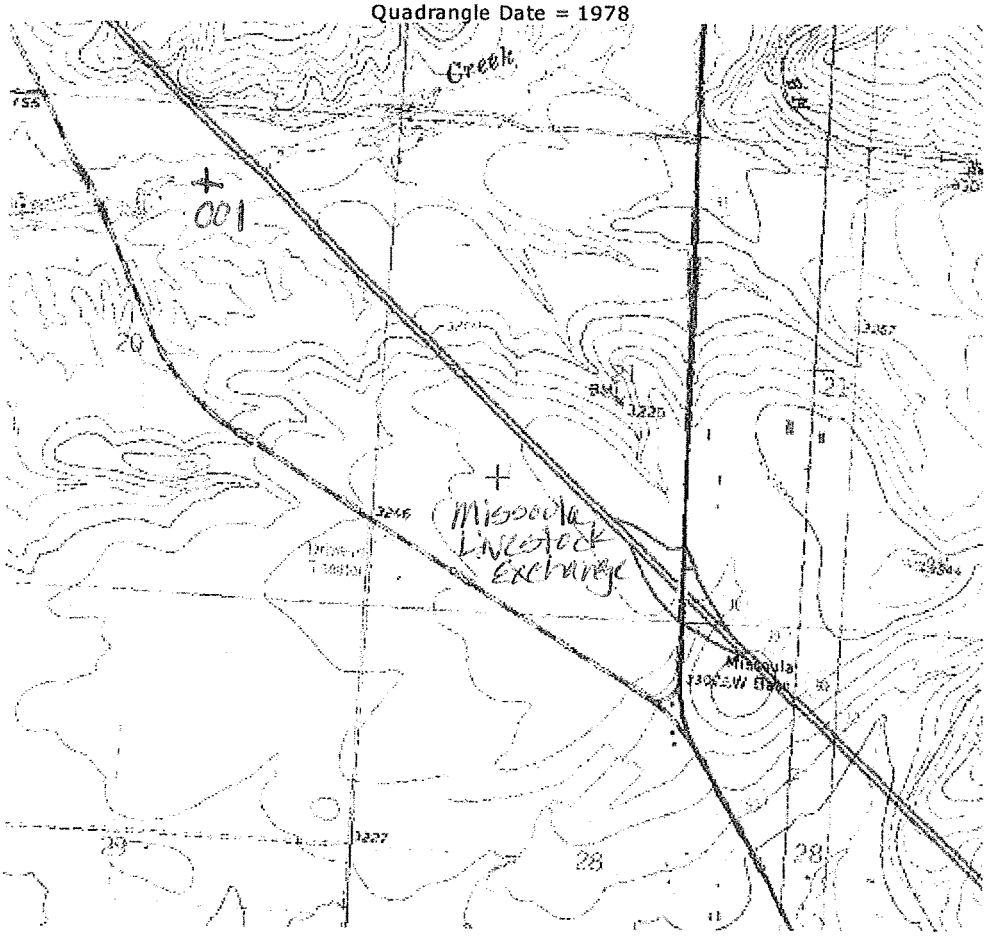
Montana Topographic Map Finder

The map is 1.86 miles wide.

Choose Image Type

Topographic Map | Refresh

Quadrangle Date = 1978



Map Size: Extra Large | Large | Small | Refresh

Click Here to view other map data for this area.

Select a Map Control, then click on the map

Map Controls

ZoomIn | ZoomOut | New Center

Zoom Factor: 3

State View

Map Center Coordinates at Red +

Datum: NAD83 | NAD27

Decimal Degrees
Lat 46.95444 Long -114.13972

State Plane
E 247242 N 310967

UTM Zone 11
E 717633 N 5204073

US National Grid
11T QN 17633 04073

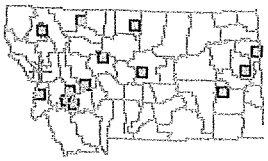
TRS T14N R20W S21

Hydrologic Unit 17010204
Middle Clark Fork

Download 24K quadrangle: Primrose

Download 100K quadrangle: Missoula West

Click the small map to move the main map center.



Green squares show areas where 2004 hi-resolution color photos are available.

Legend | Help

Search Tools

Montana Natural Resource Information System

Technical questions about the application can be directed to: nris@mt.gov
Please let us know if you have problems with the Topofinder!!

Section H – Concentration Animal Feeding Operation Characteristics

Waste Production, Storage and Disposal

Animal type	Number in Open Confinement	Number Housed Under Roof
☐ Mature Dairy Cows		
☐ Dairy Heifers		
☐ Veal Calves		
☑ Cattle (not dairy or veal)	1502 hd- biggest sale day	
☑ Swine (55 lbs or over)	17 hd- biggest sale day	
☐ Swine (55 lbs or under)		
☑ Horses	95 hd- biggest sale day	
☑ Sheep or Lambs	34 hd- biggest sale day	
☐ Turkeys		
☐ Chickens (broilers)		
☐ Chickens (layers)		
☐ Ducks		
☐ Other (Specify:_____)		
☐ Other (Specify:_____)		
☐ Other (Specify:_____)		

Manure, Litter and/or Wastewater Production and Use.

How much manure, litter, and process wastewater is generated annually by the facility?

Solid (tons): Approx 650 T Liquid/Slurry (gallons): None

If land applied, how many acres of land under control of the permit applicant are available to apply the manure, litter, or process wastewater generated from the facility? (Note: Do not include setback distances in available acreage

None Acres

How much manure, litter, and process wastewater is transferred to other persons per year? (estimated) Solid (tons): All Liquid/Slurry (gallons): None

Were the containment structures built after February 2006? NO

- ☐ Do the waste containment structures have 10 feet of separation between the pond bottom and any bedrock formations? YES
- ☐ Do the waste containment structures have 4 feet of separation from the pond bottom and any ground water?
- ☐ Were any of the waste containment structures built within 500 feet of any existing well? NO YES

	Type of Containment/Storage	Total Capacity	Units (gallons or tons)	Days of Storage
☐	Anaerobic Lagoon			
☑	Storage Pond #1	589,050 cg		
☐	Storage Pond #2			
☐	Storage Pond #3			
☐	Storage Pond #4			
☐	Storage Pond #5			
☐	Above Ground Storage Tank			
☐	Below Ground Storage Tank #1			
☐	Below Ground Storage Tank #2			
☐	Underfloor Pits			
☐	Roofed Storage Shed			
☐	Concrete Pad			
☐	Impervious Soil Pad			
☑	Other (Specify:)			
☐	Other (Specify: concrete trench)			

Physical Data for CAFO

Nutrient Management Plan

All Concentrated Animal Feeding Operations seeking permit coverage after July 31, 2007 are required to complete and implement a Nutrient Management (NMP). The NMP must be submitted to the Department using the form provided by the Department (Form NMP). Check the box below that applies and provide the required information. The NMP must be developed in accordance with ARM 17.30.1334 and implemented upon the effective date of permit coverage. (Check One)

☑ Does the facility have an NMP?

Date NMP was developed: January 2009

Date NMP was last modified: October 2013

☐ NMP has not been prepared; provide detailed explanation below

Section I – Supplemental Information

Section J - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
Camille Coughlin	
B. Title (Type or Print)	**C. Phone No.**
Member	406 728-3052
D. Signature Camille N. Coughlin member	**E. Date Signed** 10/17/2013

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form (NOI) and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

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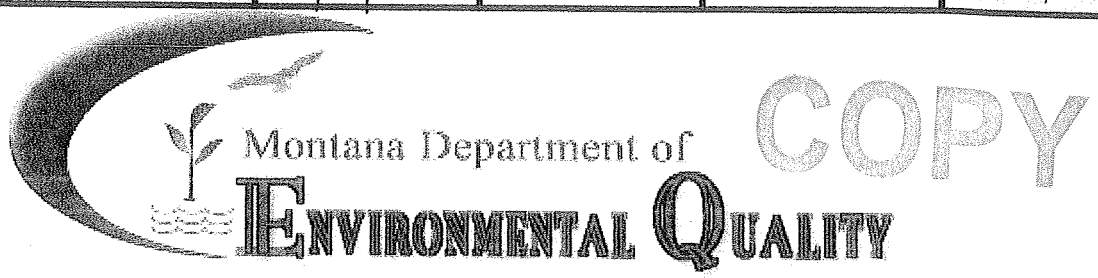
AGENCY USE ONLY				
PERMIT NO.: MT6010187	Date Rec'd.: 10/21/13	Amount Rec'd.:	Check No.:	Rec'd By: DD



WATER PROTECTION BUREAU

FORM
NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For filling out Form NMP," found at the back of this form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your NOI-CAFO. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. The 2013 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A – NMP Status:

- ☐ New — No prior NMP submitted for this site.
- ☐ Resubmitted — Previous NMP found incomplete.
- ☐ Modification — Change or update to existing NMP.
- ☑ New 2013 — New 2013 version of NMP.

Section B – Facility Information:

Facility Name: Missoula Livestock Exchange

Facility Location: 8598 Robbins Road, Missoula, MT 59808

Nearest City of Town: Missoula County: Missoula

Section C – Applicant (Owner/Operator Information):

Owner or Operator Name: Missoula Livestock Exchange LLC

Mailing Address: 8598 Robbins Road

City, State, and Zip code: Missoula, MT 59808

Facility Phone Number: 406 728-3052

Email: mle@montana.com

Section D – NMP Minimum Elements:

1. Livestock Statistics		
Animal Type and number of animals	**# of Days on Site (per year)**	**Annual Manure Production (tons, cu. yds. or gal**
1. cows- 6,547 hd/yr 30#/day	2 1/2 days	245 ton
2. bulls- 1,346 hd/yr 40#/day	2 1/2 days	67 ton
3. steers- 1,953 hd/yr 30#/day	2 1/2 days	73 ton
4. heifers- 2,078 hd/yr 30#/day	2 1/2 days	78 ton
5. calves- 8,346 hd/yr 20#/day	2 1/2 days	208 ton
6. horses- 554 hd/yr 20#/day	1 1/2 days	8 ton
7. hogs/sheep 200 hd/yr 5#	1 day	1/2 ton
8.		

Method used for estimating annual manure production:
Livestock are fed to maintain weight not for gain. Approx 48 cattle sales & 9 horse sales per year. Some cattle are checked in the day before the sale & on feed. Cattle checked in sale day go to pens with feed. After selling go to pens with no feed. Most livestock are loaded out either sale day or the day after. For manure production estimated 1/4 of cattle remain after sale & on feed for 2 days.

2. Manure Handling

a. Describe Manure handling at the facility:

Manure is removed from the concrete pens, dirt pens and alleys. It is taken via dump truck to the manure storage area.

b. Frequency of Manure Removal from confinement areas:
Weekly or as needed.

c. Is this manure temporarily stored in any location other than the confinement area? ☑ Yes ☐ No
If so then how and where?

Manure is stored in the manure holding area.

d. Is manure stored on impervious surface? ☐ Yes ☑ No
If yes, describe type and characteristics of this surface:

3. Waste Control Structures

Waste Control Structures (name/type)	Length (ft.)	Width (ft.)	Depth (ft.)	Volume (cubic ft. or gallons)	Number of days of storage
1. Process Wastewater Impoundment	150	75	8	78,750 ft³	365
2. Concrete trench	260	6	5	6,240 ft³	
3. Berms (see map)					
4. Pipelines to					
5. lagoon (see map)					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

What is the 24 hr. 25 yr. storm event at this facility 2.4 inches

Production area: 3.5 **acres. Type of lot (dirt or paved):** both concrete & dirt

Area contributing drainage form outside CAFO that enters confinement areas and waste storage, conveyance, or treatment structures: 0 **acres.**

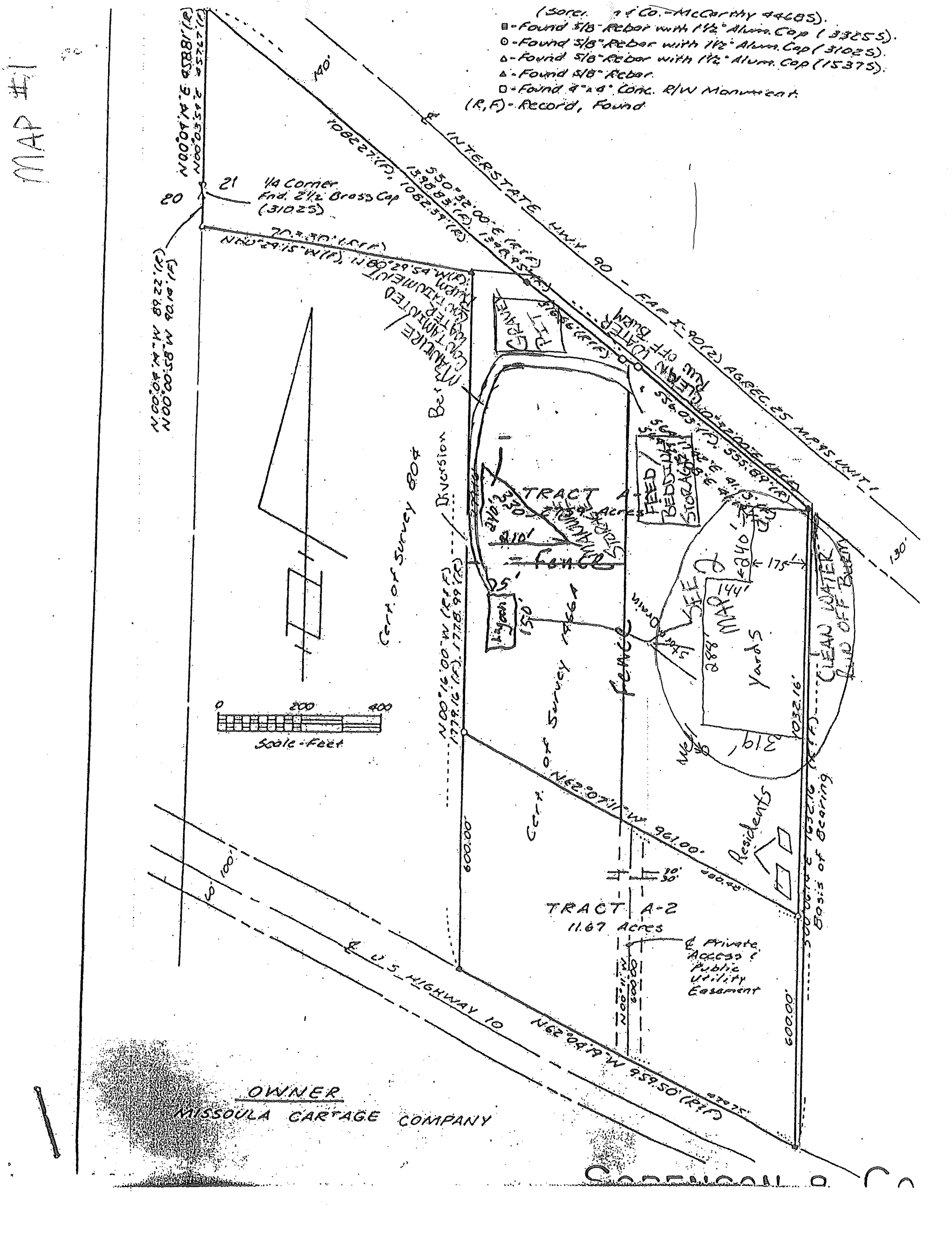
What is the annual precipitation during the critical storage period 5.8 inches

How much freeboard do the pond(s) have 12 inches

4. Disposal of Dead Animals.

Describe how dead animals are disposed of at this facility:

All dead livestock (bovine 6 months of age and under, and all equine) are removed by Baker Commodities trucks and hauled to their rendering plant in Spokane, WA. All other animals are disposed of at the dump (Allied Waste).


MAP #1
(Soren... Co. - McCarthy 4468S).
▪ - Found 5/8" Rebar with 1½" Alum. Cap (3325S).
⊙ - Found 5/8" Rebar with 1½" Alum. Cap (3102S).
△ - Found 5/8" Rebar with 1½" Alum. Cap (15375).
▲ - Found 5/8" Rebar.
□ - Found 4"x4" Conc. R/W Monument.
(R,F) - Record, Found
INTERSTATE HWY 90 - FAP I-90(2) AGREC 25 M.P. 95 UNIT 1
1/4 Corner
Fnd. 2½" Brass Cap
(3102S)
TRACT A-1
Cert. of Survey 804
Cert. of Survey 1664
Diversion
Fence
Lagoon
Gravel Pit
Feed Bedding Storage
Clean Water Run off Berm
See Map #2
Yards
Residents
Well
TRACT A-2
11.67 Acres
℄ Private Access & Public Utility Easement
N62°07'11"W 961.00'
N62°04'09"W 959.50'(R,F)
Basis of Bearing
℄ U.S. HIGHWAY 10
Scale - Feet
0 200 400
OWNER
MISSOULA CARTAGE COMPANY
SORENSON & CO

MAP #4
DIRT PENS
SLOPE TO MIDDLE OF PENS
ALLEY 1' HIGHER THAN PENS
ALLEY 1' HIGHER THAN PENS
PENS 1' LOWER THAN CONCRETE
ALLEY 1' FOOT HIGHER THAN PEN
PENS 1½ FT LOWER THAN ARENA
ARENA
CONCRETE
HORSE PEN

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

All clean water is diverted around facility or to drainage areas. There are berms that protect the feed and manure storage areas. The concrete pens drain to a concrete ditch that leads to the wastewater impoundment pond. To the east of the facility is a berm to prevent run-on of precipitation. Please see map.

6. Prohibiting Animals and Wastes from Contact with State Waters
Describe how animals and wastes are prohibited from direct contact with state waters:

All livestock are contained in pens. All wastes are contained. There is no direct contact with state waters. State waters, O'Keefe Creek, is several miles from facility.

Describe how Chemicals and other contaminants are handled on-site:

There are no chemicals stored. Baker Commodities (Spokane, Wa) is a rendering company that uses our facility. They bring empty trailers from Spokane, meet the full trucks here and take the full trailers back to Spokane, and leave the empty trailers. They also leave empty scrap containers.

7. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural BMPS which will be used to control runoff of pollutants from facility's production area. Indicate the location of these measures. If BMPS are not installed include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces,, and waterways above and open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area: decreasing open lot surface area; repairing of adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.
Production Area BMP's

All runoff water is diverted. Runoff from the concrete pens is diverted to the lagoon. Rain water is diverted to drainage areas by gutters and down spouts. A map of the facility, storage areas, lagoon (wastewater impoundment), and diversion method is attached.

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's land production area. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites;

never spray irrigating waste on to frozen ground: consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Land Application BMP's

Buffers	☐ Yes ☐ No	**Conservation Tillage**	☐ Yes ☐ No
Constructed Wetlands	☐ Yes ☐ No	**Grass Filter**	☐ Yes ☐ No
Infiltration Field	☐ Yes ☐ No	**Residue Management**	☐ Yes ☐ No
Set backs	☐ Yes ☐ No	**Terrace**	☐ Yes ☐ No

Other examples

8. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part 2 of the permit.

Has a guidance document been developed for the facility? ☑ Yes ☐ No

Certify the document address the following requirements:

Implementation of the NMP:	☑ Yes ☐ No
Facility operation and maintenance:	☑ Yes ☐ No
Record keeping and reporting	☑ Yes ☐ No
Sample collection and analysis:	☑ Yes ☐ No
Manure transfer	☑ Yes ☐ No

Provide name, date and location of most recent documentation:

DEQ Guide - Guidance Document
The DEQ Guide- Guidance Document will be in both our Environmental File and on our Record Keeping Clipboard. (October 2013)

If your answer to any of the above question is no, provide explanation:

Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

☐ Yes If yes, then the information requested in Section E must be provided.

☑ No If no, then provide an explanation of how animal waste at this facility are managed.

Manure is placed in manure storage area and then hauled away by businesses and private individuals.

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"X 17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any downgradient surface waters.
- The location of any downgradient open tile line intake structures
- The location of any downgradient sinkholes
- The location of any downgradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibration procedures:

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to ARM 17.30.1334

Other (describe)

Soil Sampling and Analysis Procedures

Representative soil (composite) samples from the top 6 inches layer of soil for each field where manure will be applied must be analyzed for phosphorus content at least once every three years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater

Soil samples collection will occur according the methods in ARM 17.30.1334

Other (describe)

Phosphorus Risk Assessment

The permittee shall access the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or

may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

Method A – Representative Soil Sample
Method B – Phosphorus Index

Method A – Representative Soil Sample

a. Obtain one or more representative soil sample(s) from the field per 17.30.1334
b. Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm)
c. Using the results of the Olsen P test, determine application basis according to the Table below.

Soil Test

Olsen P Soil Test Results (ppm)	Application Basis
<25.0	Nitrogen Needs of Crop
25.1 - 100.0	Phosphorus Needs of Crop
100.0 – 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application allowed

Method B – Phosphorus Index

a. Complete a phosphorus Index according to the crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections in Appendix A, please refer to the method as described in Natural Resource Conservation Service (NRCS), Agronomy Technical Note MT-77 (rev3), January 2006.
b. Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus

Total Phosphorus Index Value	Site Vulnerability to Phosphorus Loss
<11	Low
11-21	Medium
22-43	High
>43	Very High

c. Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	Application Basis
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

The applicant has 2 ways in which to report how manure or process wastewater application rates can be reported to DEQ.

1. **Linear Approach**. Expresses rates of application as pounds of nitrogen and phosphorus. CAFOs selecting the linear approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:
- The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater.
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. [If a state does not have an N transport risk assessment, the NMP must document any basis for assuming that nitrogen will be fully used by crops.] The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted or any other uses of a field such as pasture or fallow fields.
- The realistic annual yield goal for each crop or use identified for each field.
- The nitrogen and phosphorus recommendations from in ARM 17.30.1334 (technical standard) for each crop or use identified for each field.
- Credits for all residual nitrogen in each field that will be plant-available.
- Consideration of multi-year phosphorus application. For any field where nutrients are applied at a rate based on the crop phosphorus requirement, the NMP must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement.
- All other additions of plant available nitrogen and phosphorus (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen).
- The form and source of manure, litter, and process wastewater to be land-applied.
- The timing and method of land application. The NMP also must include storage capacities needed to ensure adequate storage that accommodates the timing indicated.
- The methodology that will be used to account for the amount of nitrogen and phosphorus in the manure, litter, and wastewater to be applied.
- Any other factors necessary to determine the maximum application rate identified in accordance with this Linear Approach.

2. **Narrative Rate Approach**. Expresses a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied. CAFOs selecting the narrative rate approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:
- The maximum amounts of nitrogen and phosphorus that will be derived from all sources of nutrients (pounds/acre for each crop and field).
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted in each field or any other uses of a field such as pasture or fallow fields, including alternative crops if applicable. Any alternative crops included in the NMP must be listed by field, in addition to the crops identified in the planned crop rotation for that field.
- The realistic annual yield goal for each crop or use identified for each field for each year, including any alternative crops identified.
- The nitrogen and phosphorus recommendations from ***[the permitting authority to specify acceptable sources]*** for each crop or use identified for each field, including any alternative crops identified.
- The methodology (including formulas, sources of data, protocols for making determination, etc.) and actual data that will be used to account for: (1) the results of soil tests required by Parts II.A.4.b and III.A.3.g of this

permit, (2) credits for all nitrogen in the field that will be plant- available, (3) the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied, (4) consideration of multi-year phosphorus application (for any field where nutrients are applied at a rate based on the crop phosphorus requirement, the methodology must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement), (5) all other additions of plant available nitrogen and phosphorus to the field (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen), (6) timing and method of land application, and (7) volatilization of nitrogen and mineralization of organic nitrogen.
- Any other factors necessary to determine the amounts of nitrogen and phosphorus to be applied in accordance with the Narrative Rate Approach.
- NMPs using the Narrative Rate Approach must also include the following projections, which will not be used by the permitting authority in establishing site-specific permit terms:

i. Planned crop rotations for each field for the period of permit coverage.
ii. Projected amount of manure, litter, or process wastewater to be applied.
iii. Projected credits for all nitrogen in the field that will be plant-available.
iv. Consideration of multi-year phosphorus application.
v. Accounting for other additions of plant-available nitrogen and phosphorus to the field.
vi. The predicted form, source, and method of application of manure, litter, and process wastewater for each crop

- If the receiving water is on the 303(d) list for nutrients then the narrative rate approach must be used.

a. For the Linear Approach the permittee will complete the Nutrient Budget Worksheet, below, for the next 5 years to which manure or process waste water is or may be applied. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet

Field identification:	Year:	Crop:
Expected Crop Yield:		
Phosphorus index results or Phosphorus application from soil test:		
Method of Application:		
When will application occur:		

Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre			
2	(-)	Credits from previous legume crops, lbs/ac			
3	(-)	Residuals from past manure production lbs/acre			
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre			
5	(-)	Nutrients supplied in irrigation water, lbs/acre			
6		**= Additional Nutrients Needed, lbs/acre**			
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)			
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0			
9		**= Available Nutrients in Manure, lbs/ton or lbs/1000 gal**			
10		Additional Nutrients needed, lbs/acre (calculated above)			
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)			
12		**= Manure Application Rate, tons/acre or 1000 gal/acre**			

Comments:

Section F - CERTIFICATION

Permittee Information: This form must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
Camille Coughlin	
B. Title (Type or Print)	**C. Phone No.**
Member	406 728-3052
D. Signature Camille S. Coughlin member	**E. Date Signed** 10/17/2013

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

RECEIVED
OCT 21 2013
DEQ/WPB
PERMITTING & COMPLIANCE DIV.